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below the tank shell. On cars with continuous center sills, the breakage groove or its equivalent must be above the bottom of the center sill construction.

- (4) The closure plug and seat shall be readily accessible or removable for repairs.
- (5) The closure of the washout nozzle must be equipped with a ¾-inch solid screw plug. Plug must be attached by at least a ¼-inch chain.
- (6) Joints between closures and their seats may be gasketed with suitable material.
  - (b) [Reserved]

[29 FR 18995, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 179–10, 36 FR 21345, Nov. 6, 1971; Amdt. 179–40, 52 FR 13046, Apr. 20, 1987; 66 FR 45186, Aug. 28, 20011

## § 179.100-16 Attachments.

- (a) Reinforcing pads must be used between external brackets and shells if the attachment welds exceed 6 linear inches of 1/4-inch fillet or equivalent weld per bracket or bracket leg. When reinforcing pads are used, they must not be less than one-fourth inch in thickness, have each corner rounded to a 1-inch minimum radius, and be attached to the tank by continuous fillet welds except for venting provisions. The ultimate shear strength of the bracket-to-reinforcing pad weld must not exceed 85 percent of the ultimate shear strength of the reinforcing padto-tank weld.
- (b) Attachments not otherwise specified shall be applied by approved means.

 $[29~\mathrm{FR}$  18995, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 179–10, 36 FR 21346, Nov. 6, 1971]

#### §179.100-17 Closures for openings.

(a) Closures shall be of approved design and made of metal not subject to rapid deterioration by the lading. Plugs, if used, shall be solid, with NPT threads, and shall be of a length which will screw at least six threads inside the face of fitting or tank.

(b) [Reserved]

# §179.100-18 Tests of tanks.

(a) Each tank shall be tested by completely filling tank and manway nozzle

with water or other liquid having similar viscosity, at a temperature which shall not exceed 100 °F during the test; and applying the pressure prescribed in §179.101. The tank shall hold the prescribed pressure for at least 10 minutes without leakage or evidence of distress.

- (b) Insulated tanks shall be tested before insulation is applied.
- (c) Caulking of welded joints to stop leaks developed during the foregoing test is prohibited. Repairs in welded joints shall be made as prescribed in AAR Specifications for Tank Cars, appendix W (see §171.7 of this subchapter).
- (d) Testing of exterior heaters is not a specification requirement.

[29 FR 18995, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967; 66 FR 45186, Aug. 28, 2001]

# § 179.100-19 Tests of safety relief valves.

- (a) Each valve shall be tested by air or gas for compliance with §179.15 before being put into service.
  - (b) [Reserved]

[29 FR 18995, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, as amended at 62 FR 51561, Oct. 1, 1997]

## §179.100-20 Stamping.

(a) To certify that the tank complies with all specification requirements, each tank shall be plainly and permanently stamped in letters and figures at least % inch high into the metal near the center of both outside heads as follows:

	Example of required stamping
Specification  Material  Cladding material (if any)  Tank builder's initials  Date of original test  Car assembler (if other than tanker builder).	DOT-105A100W ASTM A 516 ASTM A240-304 Clad ABC 00-0000 DEF
Cladding material (if any)	ASTM A240-304 Clad ABC

# (b) [Reserved]

[29 FR 18995, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 179–10, 36 FR 21346, Nov. 6, 1971; Amdt. 179–52, 61 FR 28679, June 5, 1996; 65 FR 50463, Aug. 18, 20001